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ABSTRACT

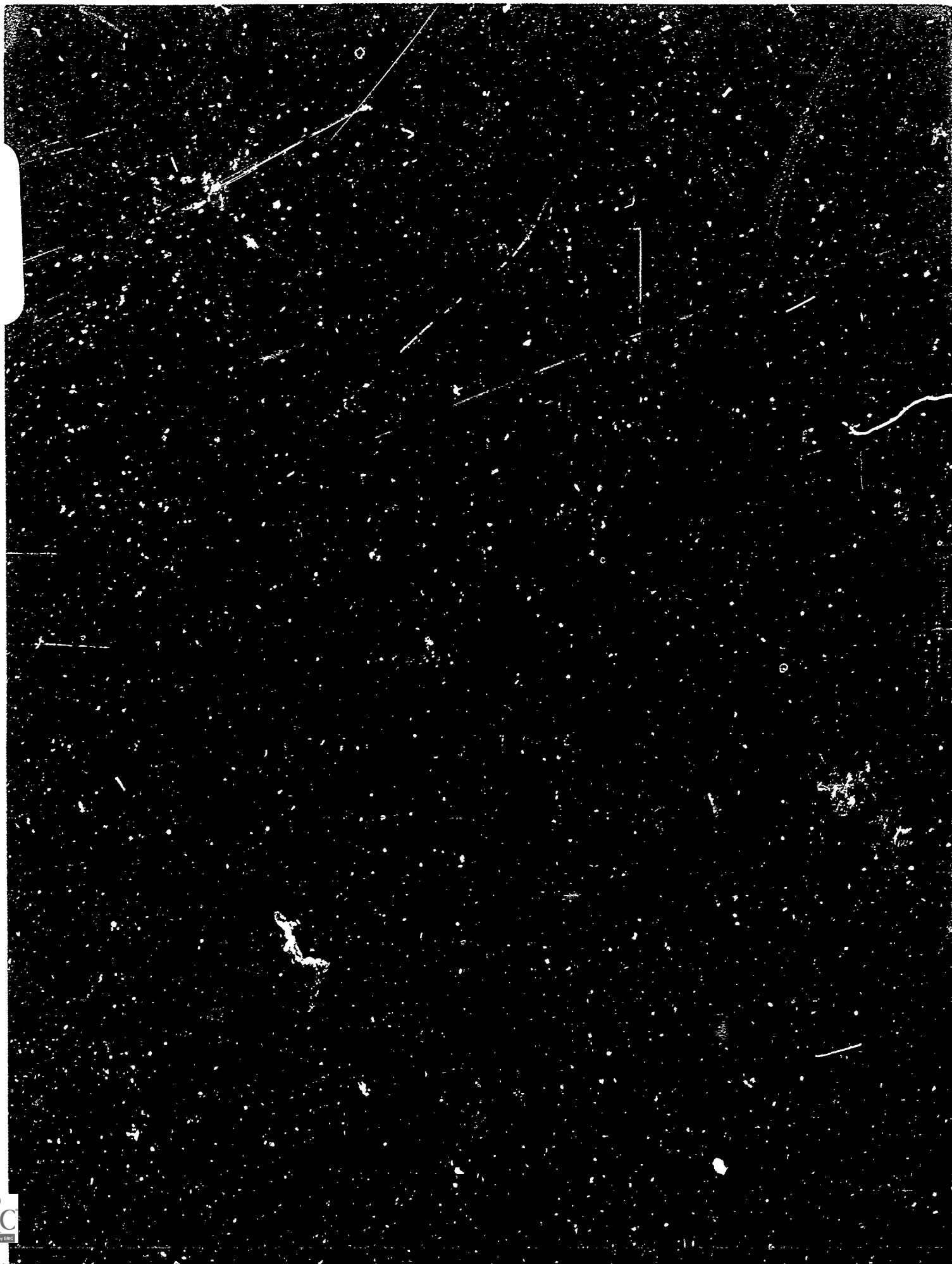
General conclusions and recommendations resulting from a second in-depth evaluation of the Expanded Food and Nutrition Education Program of the Cooperative Extension Service, conducted 1 April 1970 through 31 March 1971, are presented. Evaluation data were collected from Extension personnel associated with the program and from local and state Extension personnel in 10 states. General conclusions, which are discussed in detail in the report, were: (1) nutrition education objectives are being met, but greater precision is required; (2) the program promotes improved nutrition related practices; (3) the Extension Service and its use of indigenous aides are appropriate and effective in nutrition education of low-income families; (4) agents are dedicated in the program role, but their capabilities are increasingly stressed; (5) there is real opportunity for a surge of leadership at higher levels of program management; (6) the program continues to reach the target family population; (7) the link between homemaker and youth efforts should be strengthened; (8) interpretation of objectives and methodological restrictions impede effectiveness of youth activities; (9) reasonable progress has been made in establishing the program within the total community setting; and (10) the need for remedial actions has grown; increasing Extension Service awareness of program weaknesses is a promising sign. (DB)

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## INTRODUCTION

This report presents a summary of general conclusions and recommendations resulting from a second in-depth evaluation of the Expanded Food and Nutrition Education Program of the Cooperative Extension Service (CES). The study was conducted during the period 1 April 1970 through 31 March 1971 at a selected sample of program locations. Results reported here expand, and where appropriate, modify findings of the previous evaluation of the program conducted by Datagraphics during the period January through July 1969. It is intended that both this and the earlier in-depth evaluation supplement data obtained by the Extension Service, United States Department of Agriculture (USDA) and by the Economic Research Service (ERS) in a manner that will enhance overall program performance.

## EVALUATION OBJECTIVES

This evaluation was based on a review of program objectives and in response to specific actions identified by Extension Service in its request for the study. Discussions with Federal, State, and county Extension personnel were used to amplify the objectives thus defined. The following evaluation objectives were implemented:

- Δ Validation of the previous evaluation results and recommendations.
- Δ Characterization of program activities and achievements as related to program variables, including:
  - Identification and quantification of program achievements.
  - Association of achievement types and levels with program or situational characteristics.
  - Determination of combinations of program characteristics and their dimensions which best meet varying situations or conditions.
  - Integration of quantitative/qualitative characteristics of program operation into program effectiveness models.

Δ Assessment of new dimensions or emphases of program operation, including:

- Nutrition education and personal development of youth.
- Integration of youth activities into overall program operation.
- Implementation of the use of volunteers in program operation.
- Identification and assessment of unique characteristics, operations, or achievements which could be applied more generally to provide continued growth, reach, and forward vision for the program.

Δ Identification and assessment of problems and barriers encountered beyond the formative stages of the program, including:

- Identification of effective solutions to problems encountered.
- Identification of means by which barriers can be overcome.

Δ Identification of the need and/or opportunities to expand or modify the program beyond its current scope so that it remains responsive to participant needs and growth potential.

## STUDY DESIGN

### Sample

The study was carried out in the program units included in the previous evaluation, as follows:

- Δ Alabama--Marengo, Monroe, and Perry Counties
- Δ California--Kern and Tulare Counties
- Δ Illinois--Chicago

- Δ New Jersey--Jersey City and Newark
- Δ Texas--San Antonio
- Δ Washington--King and Pierce Counties
- Δ West Virginia--Beckley Area, including Fayette, McDowell, Mercer, Raleigh, and Summers Counties

Three additional locations where special youth activities had been underway since initial stages of the program were included, as follows:

- Δ Louisiana--New Orleans Area, including Jefferson, Orleans, and St. Bernard Parishes
- Δ Nebraska--Omaha
- Δ New York--Syracuse

All study locations were selected by Extension Service-USDA to include different geographic areas, urbanizations, ethnic backgrounds of program personnel and participants, etc., and to represent variation in program design and operation rather than to provide a representative sample of the national program.

### Data Collection Techniques

The data collection effort was designed to derive program review information through documentation of program activities and interview of program personnel and participants. The intent of the data collection design was to incorporate information available through regular program sources (e.g., Family Records, Food Records, logs) and to avoid generation of activities or feedback information which would modify or require changes in local program operation. The criterion measure for homemaker participants was, thereby, restricted to the generally available Food Record information. The lack of a similar, generally available criterion measure for youth participants imposed a limitation on evaluation efforts for that portion of the program.

At each study location, data were collected from Extension personnel associated with the program--agents, supervising aides, program aides, participating families, youth participants, and volunteers (Table 1). In addition, information was gathered from State Extension personnel, other local Extension personnel (e.g., County Directors, 4-H Agents) and from representatives of other relevant agencies within the community.

Table 1

## Description of Sample Included in the Collected Data

|                             | Ala | Cal | Ill | La  | Neb | N.J. | N.Y. | Tex | Wash | W.Va | Total |
|-----------------------------|-----|-----|-----|-----|-----|------|------|-----|------|------|-------|
| <u>Study Locations</u>      |     |     |     |     |     |      |      |     |      |      |       |
| (Counties or urban centers) | 3   | 2   | 1   | 3   | 1   | 2    | 1    | 1   | 2    | 5    | 21    |
| <u>Program Personnel</u>    |     |     |     |     |     |      |      |     |      |      |       |
| Supervising Agents          | 5   | 5   | 4   | 5   | 4   | 2    | 3    | 4   | 2    | 8    | 42    |
| Supervising Assistants      | -   | 7   | 4   | 7   | 1   | 2    | 3    | 8   | 3    | -    | 35    |
| Program Aides               | 22  | 28  | 25  | 19  | 23  | 24   | 18   | 33  | 28   | 17   | 237   |
| Volunteers                  | 4   | 7   | -   | 11  | 6   | -    | -    | 8   | 9    | 4    | 49    |
| <u>Program Participants</u> |     |     |     |     |     |      |      |     |      |      |       |
| Homemakers in sample*       | 303 | 330 | 298 | 319 | 323 | 296  | 304  | 309 | 321  | 317  | 3,120 |
| Homemakers interviewed**    | 71  | 70  | 71  | 68  | 75  | 63   | 71   | 66  | 69   | 74   | 698   |
| Youth interviewed           | -   | 18  | -   | 21  | 22  | -    | 21   | 28  | 29   | 18   | 157   |
| <u>Other Agencies</u>       | 5   | 5   | 5   | 5   | 5   | 5    | 5    | 5   | 5    | 5    | 50    |

\*214 of the interviewed aides are represented.

\*\*158 of the interviewed aides are represented.

Comparison of major descriptive characteristics of the study sample and the total program population as of September 1970 indicates a high representation of urban centers in the study sample (Table 2). There was also a higher proportion of black participants and a higher family income for the sample population than for the total population.



Table 2  
Comparison of Study Sample and  
Total Program Participant Characteristics

|                                | Total Program<br>(as of September 1970) | Study Sample* |
|--------------------------------|---|---------------|
| <u>Home Location</u>           |   |               |
| Number                         | 243,881                                 | 2,986         |
| Percent:                       |   |               |
| Urban                          | 59.1                                    | 75.0          |
| Rural Non-Farm                 | 33.7                                    | 20.6          |
| Farm                           | 7.2                                     | 4.4           |
| <u>Ethnic Background</u>       |   |               |
| Number                         | 242,419                                 | 2,967         |
| Percent:                       |   |               |
| White (Non-Spanish-American)   | 33.6                                    | 22.5          |
| Black                          | 47.3                                    | 55.7          |
| Spanish-American               | 16.7                                    | 19.4          |
| Oriental                       | .1                                      | .1            |
| Indian                         | 1.9                                     | 2.1           |
| Other                          | .4                                      | .2            |
| <u>Family Size</u>             |   |               |
| Number                         | 243,881                                 | 3,057         |
| Mean                           | 4.9                                     | 5.2           |
| <u>Family Income Last Year</u> |   |               |
| Number                         | 231,638                                 | 2,458         |
| Percent:                       |   |               |
| Less than \$1,000              | 14.7                                    | 7.5           |
| \$1,000 - \$1,999              | 24.7                                    | 20.8          |
| \$2,000 - \$2,999              | 22.2                                    | 20.1          |
| \$3,000 - \$3,999              | 17.9                                    | 20.3          |
| \$4,000 - \$4,999              | 11.2                                    | 18.0          |
| \$5,000 or greater             | 9.2                                     | 13.3          |

\*Number varies to exclude unknown data.

### Data Analysis Techniques

Data analysis consisted essentially of the following four types:

- Δ Review and analysis of field notes and other non-systematic data.

- Δ Routine data processing for description of the study population.
- Δ Analyses to test specific hypotheses relating to overall program performance.
- Δ Special analyses to explore specific issues arising out of direct observation and special questions posed.

### Program Model

A descriptive model which represents components of the Expanded Food and Nutrition Education Program and their complex interactions was prepared (Figure 1 on pages 28 and 29). The model characterizes in graphic form the basic dimensions of: program administration and resources at the Federal, State, and local levels; program personnel and their characteristics; participant families and their characteristics; youth participant characteristics; and program activities. Descriptively, it relates these characteristics to program performance.

It should be noted that dimensions of the program characteristics included are, for the most part, known to or knowable at various levels of program management and operation. The principal utility of the model to Federal, State, and local program personnel is as a management tool for assistance in planning and decision making. Program achievements (appearing on the right side of the model) are effected by program characteristics (at the left side), with respect to program participant characteristics (in the middle of the model). Where insufficient achievements are demonstrated or observed, changes in the level of program inputs can be made to increase program effects. These modifications should be made in light of participant and local community characteristics. The model implies complex interactions and feedback between its many component parts. However, attention to the dimensions of the program set forth in the illustration of the program will, in and of itself, provide greater awareness of the varieties of conditions and characteristics which contribute to program performance. Given such attention at the management and operational levels, the model can provide, at a minimum, insights into areas which need review or reconfiguration from time to time.

Implementation of the model provided the primary mechanism for the development of analyses supporting the investigation. The major analysis examined relationships between the set of program descriptive

characteristics and the criterion variable for identification of significant characteristics of program operation, personnel, and participants associated positively or negatively with program performance. (Pearson product moment correlation was used for this analysis.)

### Economic Resource Adequacy Analysis

A review of the adequacy of the family's economic resources to provide an adequate diet was made on the basis of concepts applied by Orshansky (1965). This technique projects the family food cost on the basis of: total family size; age and sex of family members; and residence location. Based on findings of the 1960-61 survey of consumer expenditures, food cost for farm families is reduced by 30 percent (USDA, 1966). In projecting the family food cost, the Low-Cost Food Plan data for September 1970 were used (USDA, 1970). The monthly food cost reported by the family was calculated as a percent of the projected food cost.

The projected family food cost was also used to project the total family economic resources required to remain out of poverty. The monthly income reported by the family was calculated as a percent of the projected total family income resources required.

## SUMMARY OF FINDINGS

Findings of the study are summarized here as they can contribute to improved program performance at various levels of the program. They reflect strengths and weaknesses of the program and are accompanied by recommendations for enhanced program performance where appropriate. The conclusions provided are generalized to the overall program and do not necessarily apply to all locations. General conclusions about program performance are stated below and discussed in greater detail in the remainder of the report.

- Δ Family Nutrition Practices. Nutrition education objectives are being met but greater precision is required in the allocation of effort.
- Δ Nutrition-Related Practices. The program promotes improved nutrition-related practices. Only indirect means are available for demonstrating these important achievements.
- Δ The Indigenous Aide. The role of Extension Service and its use of indigenous aides for nutrition education of low-income families continues to be appropriate and effective.
- Δ Supervising Agents. Agents continue to be hard working, conscientious, and dedicated in the program role but their capabilities are increasingly stressed.
- Δ Program Leadership. There is a real opportunity for a surge of leadership at higher echelons of program management.
- Δ Reaching the Target Audience. The program continues to reach the target family population. Selection of youth participants would benefit by increased precision.
- Δ Operational Structures. The link between homemaker and youth efforts should be strengthened to permit greater impact on family nutritional practices.
- Δ Youth Activities. Interpretation of objectives and methodological restrictions impede effectiveness of youth activities.
- Δ Community Role. Reasonable progress has been made in establishing the program within the total community setting.
- Δ Need for Remedial Actions. The need for remedial actions identified earlier has grown. Increasing Extension Service awareness of program weaknesses is a promising sign.

## FAMILY NUTRITION PRACTICES

*Nutrition education objectives are being met but greater precision is required in the allocation of effort.*

The program is reaching the target population of homemakers and effecting their improved nutritional knowledges and practices. However, fuller effectiveness could be achieved with a more precise allocation of the aide's and the program effort. Although we recognize the boost the responsive homemaker affords to the aide's morale in performing her difficult assignment, too many of the high nutrition, relatively high economic resource, and knowledgeable homemakers are retained in the program longer than necessary. An earlier and more purposeful effort should be made to move these exceptionally able homemakers into becoming applicants for program aides, youth volunteers, aides in other community programs, or participants in other Extension activities. A larger proportion of homemakers with average family nutrition and learning capabilities should be moved through the individual home visit phase between the sixth and twelfth month.

There are essentially no records of what happens between an initial contact and the time a family is enrolled, if that stage is reached. It is our impression that a reasonable proportion of initial contacts with families with adequate family nutrition and adequate economic resources never result in enrollment. On the other hand, it is also our impression that many of the homemakers with least nutritional understanding, poorest economic resources, and worst family nutrition discourage the aide before reaching the stage of a family record. There is probably a goodly proportion of such homemakers who cannot be motivated to participate--with any reasonable expenditure of effort. But, it is not the homemakers who place the highest value on or have the greatest interest in nutrition who have the most to gain. We recommend that a greater proportion of program effort go into bringing needy families with only marginal interest into the program, and suggest, within this section of the report, some considerations which might be applied in furtherance of a more precise allocation of program effort.

### Homemaker Dietary Improvement

Education of the homemaker in nutritional practices has a beneficial effect. This effect is demonstrated through the 24-hour food recall results across time in the program (Table 3). The trend of

working over longer periods of time with homemakers having relatively poorer initial diet is also apparent in these data, demonstrating the program's potential for dealing successfully with difficult cases. (Of the three groups having more than one recall, those in the program 18 months have an average initial recall of 7.52, those in 12 months have an average initial recall of 7.86, and those in only 6 months have an average initial recall of 8.13.) Poorer initial diet is demonstrated as an effective participant selection criterion, but additionally as a practical indicator for relative duration of program participation.

Table 3

Economic Resources and Initial and Most Recent Food Recalls

| Group                       | Measure                                     | Percent Adequacy of Economic Resources |       | 24-Hour Food Recall |              |                    |
|-----------------------------|---|--|-------|---------------------|--------------|--------------------|
|                             |   | Number                                 | Mean  | Number              | Mean         | Standard Deviation |
| Initial Recall Only         |   | 648                                    | 71.47 | 908                 | 7.93         | 2.48               |
| Most Recent Recall-- 6 mos. | Initial                                     | 271                                    | 68.13 | 770                 | 8.13         | 2.35               |
|                             | Most Recent<br>Most Recent<br>Minus Initial |  |       | 788                 | 9.10<br>.97  | 2.15               |
| Most Recent Recall--12 mos. | Initial                                     | 179                                    | 65.34 | 472                 | 7.86         | 2.40               |
|                             | Most Recent<br>Most Recent<br>Minus Initial |  |       | 469                 | 8.59<br>.73  | 2.39               |
| Most Recent Recall--18 mos. | Initial                                     | 151                                    | 62.75 | 322                 | 7.52         | 2.24               |
|                             | Most Recent<br>Most Recent<br>Minus Initial |  |       | 329                 | 8.91<br>1.39 | 2.17               |

Percent Adequacy of Economic Resources is based on most recent monthly income. See description of the analysis on page 7.

Mean 24-Hour Food Recall is based on a maximum of 12 servings (2 + 2 + 4 + 4).

Standard Deviation is defined as a measure of dispersion around the mean. In a normal distribution, two-thirds of the cases would fall within plus or minus 1 standard deviation of the mean.

Although a trend of lower economic resource adequacy also appears associated with program tenure in these data (62.75 percent adequacy for those in the program 18 months versus 68.13 percent adequacy for those in only 6 months), closer examination of the 601 families in the program long enough to have had more than one food recall indicates that variation in setting--urban, rural non-farm, and farm--reflect different patterns of economic resource adequacy over time in the program (Table 4).

Table 4

Adequacy of Economic Resources  
by Location and Time in Program\*

| Food Recall Period | Percent Adequacy of Economic Resources |       |       |                |       |       |            |       |       |       |       |       |
|--------------------|--|-------|-------|----------------|-------|-------|------------|-------|-------|-------|-------|-------|
|                    | Urban                                  |       |       | Rural Non-Farm |       |       | Rural-Farm |       |       | Total |       |       |
|                    | N                                      | Mean  | %     | N              | Mean  | %     | N          | Mean  | %     | N     | Mean  | %     |
| 6 Mos.             | 173                                    | 73.65 | 56.4  | 82             | 60.95 | 32.7  | 16         | 45.26 | 37.2  | 271   | 68.13 | 45.1  |
| 12 Mos.            | 94                                     | 78.75 | 30.6  | 70             | 54.69 | 27.9  | 15         | 31.05 | 34.9  | 179   | 65.34 | 29.8  |
| 18 Mos.            | 40                                     | 87.35 | 13.0  | 99             | 54.83 | 39.4  | 12         | 46.02 | 27.9  | 151   | 62.75 | 25.1  |
| Total              | 307                                    | 77.00 | 100.0 | 251            | 56.79 | 100.0 | 43         | 40.55 | 100.0 | 601   | 65.95 | 100.0 |

\*Based on a sample of 601 cases where the following were available: most recent and initial food recall and knowledge, income and food cost, home location, homemaker age, age and sex of family members, and food assistance program participation/non-participation. Initial food recall/knowledge data were controlled for collection within three months of first aide visit.

The demonstrated differences between urban and rural non-farm resource adequacy associated with program tenure may relate to any or all of the following:

- Δ A tendency for rural non-farm participants to stay in the program longer than urban participants. This may be due to non-program-related population shifts within urban settings and program operational modes at the more rural locations which permit longer aide continuation with participant families.



- △ A higher probability of enrollment of the less economically deprived in urban than in rural areas. It is more difficult to be selective in recruiting in urban areas and more difficult to terminate participation without jeopardizing rapport in the neighborhood. Also, the more self-sufficient urban family is more geographically stable than the urban family at the low end of the economic scale which is highly transient.
- △ A program tendency to increase family resources through increased use of other community programs and the greater availability of resource support in urban areas than in rural. While this contention is supported by other data, the major impact of resource augmentation takes place early in the homemaker's program life and is not continuously increasing as a function of program tenure.

In attempting to further identify homemaker or family characteristics which could be used to predict the program's potential for effecting dietary change, we examined such factors as homemaker age, education, ethnic background, etc., and family characteristics such as size, composition, etc. We were unable to identify a profile of homemaker or family characteristics which powerfully and unambiguously identifies families with greatest potential for benefit from the program. Homemaker identifications of food necessary for good health (food knowledge), likewise, do not appear useful for identification of families with greatest potential for benefit.

About one-tenth of the variability in the homemaker's most recent food recall can be associated with their status on initial food recall. However, further analysis demonstrates much of this variability to be associated with the aide. About one-third of the variability across most recent food recall can be associated with status on initial food recall--when the variability is measured across average nutritional adequacy reported for her homemakers by a given aide. The tendency for aides to establish a particular level on food recall records is not associated appreciably with any general aide characteristics such as ethnic background, setting (rural, rural non-farm, urban), education, or previous job experience. Much of the relationship between homemaker initial and most recent food recall appears to be accounted for by differences among aides in training and application of the food recall procedure and by differences in their nutrition teaching emphases.

Only about seven percent of the variability among homemakers on the most recent food knowledge can be associated with knowledge indicated initially. This can be accounted for by the nearly 60 percent of variability in common between initial and most recent knowledge when measured across the average knowledge reported for all homemakers served by a given aide. In this context, both aide ethnic background



and setting were modestly (but significantly) related to average food knowledge reported. Thus, homemaker food knowledge in particular, appears to be much more a function of the aide than of the homemaker.

### Allocation of Effort

The above factors make a rather bleak picture for finding ways to improve selective allocation of effort to families that will most benefit from the program. Factors which generate hope for such improvement and which help point the directions for improved selectivity can be identified as follows:

Δ Aide influence on the food recall information and the effect of repeated homemaker exposure to the food recall situation notwithstanding, the sequential homemaker food recalls do represent valid improvement as a result of exposure to the Expanded Food and Nutrition Education Program.

Δ Homemakers who drop out of the program between the initial and six-month food recalls do not differ significantly on adequacy of initial recall from homemakers who remain in the program through this period. However, from the time of the first six months onward, homemakers with better initial diet tend to leave the program more quickly than homemakers with less adequate diet.

The appropriate nature, amount, and duration of effort an aide should spend with a family will vary greatly from one homemaker and her family to another. The decision will depend upon not only demonstrated dietary level but also on the homemaker's nutrition-related skills. Ultimately, each family must be dealt with as an individual case for which allocation of effort must be judged on its own merits. However, the following general guidelines may serve as a useful point of reference in making these judgments:

Δ Homemakers falling in the upper quarter of initial food recall (those who typically include 10 or more of the recommended 12 minimum servings) are good candidates to gain most that is currently available from the program within the first six months of participation. This accelerated experience is more likely to be appropriate if the homemaker is a quick learner and her family's economic resources are at least 70 percent of those judged to be required to remain out of poverty.

Δ The middle group of homemakers on initial food recall (those including 6 to 10 of the recommended servings) might most appropriately participate actively in the program from 6 to 18 months. Those with fastest learning ability and more adequate

economic resources (60 percent or greater of those required to remain above the poverty line) should be moved most rapidly.

- Δ The bottom quarter of homemakers on initial food recall (those including half or less of the recommended minimum servings) may well take between one and two years to assure they have received the full potential from the program, as it is currently constituted. Fastest learners and families with 50 percent or more adequate economic resources may tend toward the one-year to 18-month period.

### Shifts in Dietary Adequacy

Based on the minimum number of recommended daily servings for each of the four food groups, we also examined shifts in dietary adequacy, on the basis of initial and most recent food recall and economic resource adequacy (Table 5). Although there are shifts from adequate to inadequate, the majority of shifts are in the expected and desired direction, i.e., from inadequate to adequate. Favorable ratios occur where they are most needed--in the fruit/vegetable and milk groups. (We interpret the more extreme ratio in the bread and cereal group as an initial de-emphasis in this area and a tendency to underreport the number of servings.)

Table 5

Shifts in Diet Adequacy from Initial to  
Most Recent 24-Hour Food Recall

| Type of Adequacy Response    | Milk | Meat | Fruit/<br>Veg. | Bread/<br>Cereal |
|------------------------------|------|------|----------------|------------------|
| Adequate to Inadequate Shift | 13.3 | 11.0 | 10.3           | 12.1             |
| Always Inadequate            | 35.1 | 3.8  | 57.4           | 24.0             |
| Always Adequate              | 21.6 | 68.4 | 8.8            | 32.4             |
| Inadequate to Adequate Shift | 30.0 | 16.8 | 23.5           | 31.5             |

N = 601. For Selection criteria, see Table 4.

## Family Nutritional Status

No substantial efforts have been made at operational units with which we are familiar to determine the impact of the program on the total family nutritional status. Interviews with aides and homemakers suggest that husbands and children can pose serious impediments to good nutritional intentions of the homemaker. In this respect, the program has a two-fold need--ways of measuring or examining family dietary characteristics and a more convincing repertory of techniques for helping the homemaker carry out her good intentions for family nutrition.

Concentration on the homemaker's information and practices for the formal recording system was an administrative expediency which can be justified in its own right. However, it would be a serious error to continue this emphasis without the provision of additional methodology which would help the homemaker and the aide to assess the dietary needs of each family member. Further, family food records should be used as the basis of much, if not most, of the aide's teaching. They should be applied more frequently than once every six months. Food checklists might well be left with family members to complete at the time of food consumption. The current procedure for collecting homemaker food knowledge lacks merit either as a tool for evaluation or as a training mechanism. Measures of homemaker nutritional knowledge need to be much improved or abolished.

We caution against the natural tendency to accept program effects on faith. Improved measures and additional aide training in administering the food recall procedure are needed for a more realistic and standard demonstration of food practice effects across the program. Admittedly, many of the longer-range and further-reaching effects cannot be measured within the day-to-day operation. However, general and long-range effects will almost always be mediated by measurable effects which are relatively immediate. We recommend, therefore, a greater emphasis on the explicit definition of goals for a given family and frequent assessment of progress toward these goals. The application of this concept to food recall data has been discussed within this section. Approaches to a similar determination and demonstration of nutrition-related capabilities are discussed within the next section.

## NUTRITION-RELATED PRACTICES

*The program promotes improved nutrition-related practices. Only indirect means are available for demonstrating these important achievements.*

The program has, from the outset, realized the important relationships between the ability to provide proper food and nutrition and other aspects of homemaking. Its obligation to steer a strict course toward nutrition and nutrition-related educational objectives is explicit, having been set legislatively rather than evolving out of program practice. There are, of course, advantages and disadvantages to such a restriction. On the one hand is the extreme need throughout the population--not just the program target audience--for improved use of resources in providing adequate nutrition. Any lessening of the imperative nature of this need through expansion of the program domain to encompass more general homemaking skills might result in a program which bears little resemblance to the nutrition education program. On the other hand, the many facets of a homemaker's ability to provide adequate nutrition for her family cannot be overlooked.

We have approached examination of the program's ability to further nutrition-related practices in three areas:

Δ Money management.

Δ Food purchase.

Δ Nutrition-related homemaking skills---including the ability to store, handle, and preserve food; sanitation procedures, both household and personal; meal planning; and the use of utensils and generalizable skills in food preparation.

### Money Management

The ability to provide an adequate diet is largely dependent upon the economic resources available. A major factor limiting program attempts to improve knowledge about utilization of economic resources is the extremely low level of economic resource available to participating families. Knowledge of resource allocation techniques is of little use to participants whose inadequate resources are also characterized by variability in weekly or monthly income. Application of such techniques is further limited by restrictions which a low income imposes upon families as to where and when to buy

and by their own intellectual/educational limitations and emotional response in dealing with money matters. In part, the problem becomes one of motivating participants toward a desire to improved money management techniques.

We found through examination of aide training that, on the average, about 10 percent of initial training and 10 percent of continuing training are devoted to money management. But discussions with aides indicate this is still an area of great frustration to them. One part of this frustration relates to their inability to establish expectations or recognize achievements concerning the extent and nature of impact on family budget handling. These frustrations are shared by the supervising agents. Although there is almost total consistency throughout the program as to what topics to include in aide money management training--wise buying, consumer rights, budgeting, identifying reputable merchants, comparative shopping, impulse buying, use of credit, home financing--there is little agreement as to techniques of instructing either aides or families. The basic difficulty with most approaches is their dependence upon middle-class concepts, an understandable deficiency given the source materials available.

Rather than viewing this solely as a condition of the program's inability to handle the difficult area of training low-income families in money management, we see the situation as holding promise for eventually providing adequate instructional materials for this difficult area. To assure this, we recommend that early attention be given at higher levels of the program to the following:

- Δ Thorough review of current developmental activities and examination of innovative approaches to provide money management techniques of relevance to the target population needs.
- Δ The building of instructional materials--for aide training and for aide instruction of families--which implement the money management techniques.
- Δ Provision of norms against which aides can evaluate their success in effecting the educational process.

### Food Purchase

The practice of shopping in supermarkets rather than small local stores is becoming more and more popular among the program families. Even in the most rural areas included in the study sample, the majority of the shopping was reported to be done in supermarkets (55 percent), while in the solidly urban and mixed areas, the percentage was much higher (80-96 percent). Other food purchase practices which the

program has furthered include distribution of recipes requiring low-cost, high-nutritional foodstuffs; substitutions among foods; and comparative food shopping. All of these approaches have had a positive impact on family expenditures. Only the last of the three, comparative food shopping, appears to need some attention in the form of provision of materials such as conversion tables, nomographs, or other forms of mathematical aids. The incorporation of unit pricing, product dating, and nutritional labeling in food markets may soon dictate a revised curriculum.

### Nutrition-Related Homemaking Skills

In our visits with participating homemakers, we found homemakers and aides in substantial agreement in the way they perceive program benefits (Table 6). Appropriately, nutrition-related areas are secondary to nutrition proper. Review of the data describing the aide working visit content supports these verbal reports. Better than 75 percent of these visits were devoted to food and nutrition as a major activity, with another 7 percent demonstrating a more minor attention to food and nutrition.

Table 6

Homemaker and Aide Report on Program Effects  
(Selected Questions and Responses)

|   | Visited<br>Homemakers | Aides About<br>Visited<br>Homemakers |
|---|-----------------------|--------------------------------------|
| <u>Most Helpful Food and Nutrition Aspect</u> |                       |                                      |
| Number  | 589                   | 513                                  |
| Percent Indicating:                           |                       |                                      |
| General to improved food and nutrition        | 72.3                  | 70.8                                 |
| Specific to food groups/food handling         | 6.6                   | 12.7                                 |
| Food budget                                   | 14.8                  | 15.6                                 |
| <u>Other Benefits or Help</u>                 |                       |                                      |
| Number  | 254                   | 341                                  |
| Percent Indicating:                           |                       |                                      |
| General to other homemaking skills            | 12.2                  | 20.2                                 |
| Sanitation                                    | 2.8                   | 6.7                                  |
| Health  | 1.6                   | 4.4                                  |

The very experience of program participation can affect homemaker practices. Even without a concerted effort to improve sanitation or food storage practices, aides report that kitchens become cleaner and more orderly on successive visits. In other instances, homemaker help in these areas is specifically sought.

### Improved Nutrition-Related Education

In general, homemakers seem to find information on nutrition-related homemaking adequate and they put it to good use. But discussions with program personnel indicate they continue to have their earlier observed difficulty in determining what activities appropriately fall within the program domain. The frequency with which we were asked by aides as to the appropriateness of certain activities indicates the concern they feel for definition of "nutrition-related" and some lack of local guideline which they can interpret.

We do not find aides usually able to teach toward a generalized set of nutrition-related skills. Rather, the emphasis is directed toward a specific food preparation, recipe, or other nutrition-related homemaking activity. Extension Service has adequate skills and knowledges to satisfy the vast area of nutrition-related homemaking skills, and increased attention to bring these capabilities to bear more directly on program participant needs is urged. Increasing the use of present skills and knowledges to these ends would entail very little additional time and money. Such an emphasis could be valuable for long-time participants who have achieved a relative proficiency in nutritional skills and knowledges. It would also provide an interest-continuing effect for those participants slower to achieve a status of adequate family nutrition.

One tool needed for a more directed approach to nutrition and to nutrition-related practices is a record which unambiguously identifies and relates homemaker skill needs to household facilities, including utensils--a detailed skills/practices facilities inventory. The planning record recently implemented in many locations is a first step in this direction. A revised form of the record should, however, identify levels of achievement and describe observations the aide could make in determining the achievement level. Completion of such a record at time of entry into the program and at subsequent intervals could provide a working tool for agent/aide review of the homemaker's progress and needs. The information contained would also contribute to a more systematic identification of aide training needs. Further, and rather importantly, the record would provide feedback by which aides could feel a sense of accomplishment and by which the program could demonstrate some of its greatest beneficial effects which, by and large, go unheeded.



We have observed the provision of non-food/nutrition-specific sessions for program participants being carried out by Extension in ways other than directly associated with the nutrition education program. These are rare instances and do not indicate either a general effort to work toward the whole homemaking domain nor to have evolved general patterns of working with the more nutritionally advanced participants through other Extension activities. The lack of provision of such activities through other avenues of Extension Service activity tends to promote program tenure for those whose nutrition education needs have been satisfied through program participation but whose interest in continuing homemaking education has not. This is particularly true for those homemakers who have evolved a group structure for program participation, frequently one which fits the traditional Extension role of training homemaker leaders for conducting their own homemaker club activities.



## THE INDIGENOUS AIDE

*The role of Extension Service and its use of indigenous aides for nutrition education of low-income families continues to be appropriate and effective.*

As "outside evaluator" through the first two years of the Expanded Food and Nutrition Education Program, we have been keenly aware of the timely relevance of the program objectives, and satisfied as to the general effectiveness of Extension Service as the program operator/manager. Emphasis of the program on a family approach to nutrition education greatly expands its potential both for effectiveness and longevity.

In our earlier report, we stated that the value of aides from the target population had been well demonstrated in pilot projects and that indigenous aides had performed effectively in early stages of the program and held great potential for the future. It remains a valid conclusion that the use of indigenous aides is one of the strongest assets of the program. However, we believe their role should be reexamined with a view to enhancing the maturing program's use of human resources. Aide turnover, employment level, and training and the use of supervisory assistants are discussed as modifications in these roles and activities could enhance overall program performance.

### Aide Turnover

The program has been in existence long enough to have established a pattern of turnover among aides. It has proven very difficult to obtain unambiguous evidence, but our impression is that the program tends to retain aides of intermediate capability longest. Although the deselection of unqualified aides is by no means perfect, there is a definite tendency for excessively timid aides and aides who are grossly unskilled at communicating nutritional knowledge to drop out of the program early--usually through a combination of self-awareness and agent encouragement.

It is not easy to be an effective program aide and it is not surprising that a goodly proportion of the persons who enter aide training ultimately do not succeed. Our observations suggest that perhaps 10 to 20 percent of the aides are marginal--not obvious misfits, but making a questionable contribution to the program. We are not saying that such aides should be written off, but feel the program could be more effective if they were helped to recognize the

requirements for effective performance by much closer and more active monitoring of the work and specific attention to their training needs. As required of other workers, they should produce or leave the program. Agents and supervising assistants could play a more responsive role in finding more suitable employment opportunities for those who lack the critical requirements for aide performance.

Resignation of the more capable aides poses a different set of problems. Although many highly capable aides have remained with the program from the beginning, it is our distinct impression that the most career-motivated and capable aides tend to move into better-paying jobs with greater opportunities for advancement. Certainly, no agent should discourage aides from leaving for a more attractive future, but a greater differentiation of responsibilities and pay scales could result in greater retention of some of the better aides.

The performance and morale of almost all aides would be improved by more frequent and greater depth of family review by the agent and/or supervisory assistant in cooperation with the aide. Modifications in the food recall procedure and nutrition-related skills analysis suggested earlier in this report would provide more precise information by which family review could occur. Agents and supervisory assistants should be more active than they have been in making selective visits with aides, i.e., selection of families to be visited should be a joint supervisor/aide decision made on the basis of family review information.

### Aide Employment Level

We have examined relationships between the aide employment level (full- or part-time) and characteristics of the way she spends her time, i.e., the number of homemakers enrolled, the number of aide-homemaker visits, the rate at which the aide progresses homemakers through the program, and the amount of time the aide spends in other types of program activity. There are no consistent relationships demonstrated. Rather, local operational modes and performance requirements appear most critical in setting the aide level of achievement. Therefore, consideration should be given to:

- △ Definition of the expected level of achievement. Aides will strive to achieve on the basis of performance goals established for them.
- △ Greater flexibility in hours worked to allow for varying types of work patterns in keeping with local community characteristics and personal preferences.

## Aide Training

The maturing program has necessarily faced an extended series of continuing, in-service training sessions. Our direct and indirect experience with this extended training leaves us with little doubt that in the main, the quality of continuing training for aides has deteriorated over time. Recent sessions are, with rare exception, less spirited and relevant to program problems than earlier sessions. In general, the continuing training has failed to respond to changing needs as the program has moved from its initial through maturing stages.

Although aide training needs have become progressively more differentiated with continued experience, provision of effective individualized instruction has not often occurred. And group training sessions have not usually capitalized on the different experiences and skills of the aides. In general, aides are neither gaining, nor perceiving that they are gaining, real increments in job-relevant skills beyond their first six months or so of tenure. There is a clear need for improvement in continuing training objectives, techniques, and supporting materials.

Continuing training would be enhanced by provision of the following types of materials:

- △ Outlines of problem areas for group discussion. Problem areas should be those of relevance to groups of aides. Outlines for discussion should include identification of profitable ways in which problem areas could be explored, e.g. case histories, sets of needed skills, core training areas.
- △ Self-instructional materials, including reading guides, which aides could use to acquire advanced skills.
- △ A guide to more precise analysis, presentation, decision making, and follow-up of participant family case studies. Revised procedures for collecting this information should guide development of the instructional guide. Review of the procedures content should provide relevance to identified participant needs.

In-service training has been demonstrated to benefit by the following:

- △ Provision of training at the local level by State-level personnel in their area of specialty. There are multiple benefits derived here: agents and aides can respond to a common learning situation; State specialists acquire a perspective of program personnel training needs and, through interaction

with the aides, a better understanding of participant skill levels and needs; cooperation among various program levels builds stronger program identification.

- Δ Preparation of systematic training plans, based on aide training needs. Implementation of the plan should permit exclusion of those aides a supervisor feels do not require or are not ready for the specific training content.

Training of replacement aides has become less adequate. The revised set of lesson plans for aide training is receiving inadequate implementation. In many locations, replacement aide training consists of one or several half-days of indoctrination by the agent and then placing the aide in the hands of another aide for on-the-job training. Although this may appear an acceptable process in concept, current initial aide training content falls far short of that included at the program outset, and aides are frequently selected to give training assistance because of geographic proximity rather than effectiveness as an aide or aide-trainer. Virtually, none of the technology of self-administered and self-paced instruction has been exploited to provide training consistency and comprehensiveness as well as providing training emphasis on an individual need basis.

There is no doubt that agents and supervising assistants need to be unburdened from repeated routine instruction of new aides. Development of a central core of training materials which utilize available training technologies should be undertaken as a national enterprise. The materials could be supplemented or modified at State or local levels. Two types of revised training materials should be provided for initial aide training:

- Δ Self-instructional materials suitable for the entering aide level.
- Δ Guidance on ways in which agents, supervisory assistants, and more experienced aides can supplement and support the self-instructional activities of the trainee.

In providing initial training for aides, consideration should be given to cooperative training efforts between adjacent counties, including sharing of agent training responsibilities. Such actions have been taken in some areas with good results. Contrary to expectation, aides are not generally opposed to travel and/or stay-over for training.

## Supervisory Assistants

Employment of supervisory assistants has increased over the time of program operation. While relieving agent overwork to some extent, their presence, in some instances, has created a whole new set of personnel management problems, many of which have centered on the lack of clear definition of roles and responsibilities. Although the initial concept of the utility of this personnel level was suggested for larger program operations, we do not see program size as the only factor indicating need for supervisory assistant(s). By some means--usually assigning special tasks to supervisory assistants, secretaries, or selected aides--all agents have had to find relief from excess work loads. And although aide salaries have advanced from program initiation, use of the special assignment as a promotional advancement or pay increase for the aide has not been effected to an appropriate extent.

Further consideration should be given to incorporation of the supervisory assistant level at all locations. Implementation of middle management into the program structure should be sensitive to:

- Δ Areas of agent overburden, capability, or interest, including record keeping, volunteer recruitment, book-keeping, selected areas of aide training, etc.
- Δ The need for special knowledge or ability that the designated candidate possesses, particularly as these can be demonstrated through performance in the aide role.
- Δ The need for clear definition and distinction of roles and responsibilities between the agent and the supervisory assistant, as well as between the supervisory assistant and program aides. It is essential that the nature of these roles and responsibilities be known at the lowest level of program operation.

Attention should be maintained to the dynamic interactive effects of the above as personnel and/or capabilities are modified over time. Where creation of new supervisory levels is not possible or practical, recognition of special aide skills, talents, or interests could be achieved by designating selected aides as specialists for areas such as other agency interaction, youth/volunteer coordination within a geographic area, coordination of specific program information, etc.

## SUPERVISING AGENT CAPABILITIES

*Agents continue to be hard-working, conscientious, and dedicated in the program role but their capabilities are increasingly stressed.*

### Agent Strengths

One of the major conclusions of our earlier evaluation was that there was great variation among sites, with much of the variation in program and operation determined by the strength of the local supervising agent. In the interim, some capable agents have been lost to the program through retirement and other forms of natural attrition; some who were less than comfortable with the assignment have moved out of the program or have a smaller role in it. The great majority of remaining supervising agents has strong motivation and solid capabilities. Further, where operation of the program during its initial stage was an all-consuming endeavor--causing great frustration about the lack of time available for other Extension activities--many agents are now able to either assume other traditional functions and roles as well, or to view their effort with the nutrition education program as a rewarding and constructive one which is and should be their total effort.

### Agent Stresses

Agent capability to cope is being strained. In response to the heightened focus on youth nutrition education, many have had to either take on a major new role or accommodate to working with another professional whose role is not adequately defined and whose relationship to total program objectives has been even less clear. In our judgment, and in the judgment of most of the agents with whom we have talked, upgrading of program operations--although desirable and feasible--has become an almost impossible task for agents already burdened by a host of day-to-day requirements and problems. It is unrealistic to expect agents to be the major source of innovations which will significantly upgrade program performance while at the same time attending to their requirements for program management and operation. In effect, the resources of training and experience which agents have brought to the program are being exhausted without an appreciable influx of new knowledge and skill from supporting materials and experience.

Although not all agents are capable or desirous of upgrading program activities and materials, many are capable and find



development of creative approaches to training and program management some of the most rewarding activities of the assignment. We do not believe that they should be--or expect to be--"spoon fed" to the destruction of this drive and professional achievement. Yet, somewhere between the handing down of all relevant information and total agent responsibility for generation of unique program elements, is a developmental mixture which permits the agent creativity in levels she can accommodate. We see this as the upper management philosophy of program activity. But the extent to which the program supports the agent by providing source materials which stimulate aides, for example, is not yet sufficient to permit the agent to attend comfortably to areas of her greatest interest and capability.

### Support to the Agent Role

We have responded to agent needs throughout much of this report and capsulize some of the suggested directions as follows:

- △ Addition of supervisory assistants and special aide assignments to relieve the agent of more routine activities.
- △ Provision of additional training materials for better design and coordination of continuing aide training. Self-instructional materials for aide initial and special training needs and/or cooperation of adjacent geographic areas in initial aide training would lessen the burden of aide replacement training.
- △ Greater direct training support by other local Extension personnel and State-level specialists.
- △ Implementation of mechanisms for greater sharing of the best available ideas and achievements across the total program.
- △ Provision of improved program records, e.g., food recall and nutrition-related skills analysis, for more precise determination of program achievements and direction.

One of the most difficult of the current supervising agent problems is the lack of program coordination. This situation has diluted program efforts and created problems the supervising agent had not anticipated in the formative stages of the program. Although by no means universal, one of the most debilitating factors for some supervising agents in recent stages has been the lack of program support within the local Extension organization. For some agents, this has meant moving the program, either physically or psychologically,

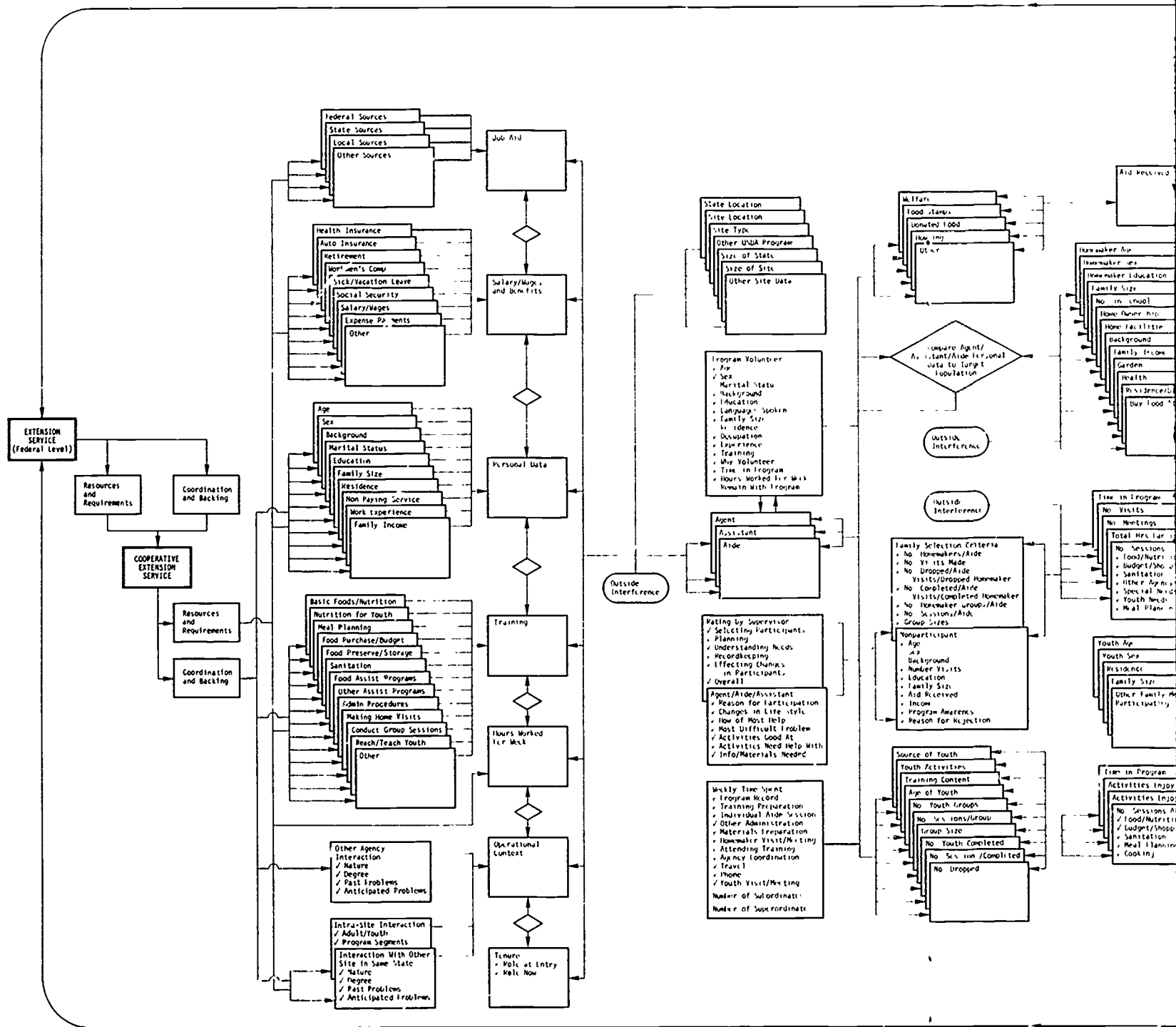
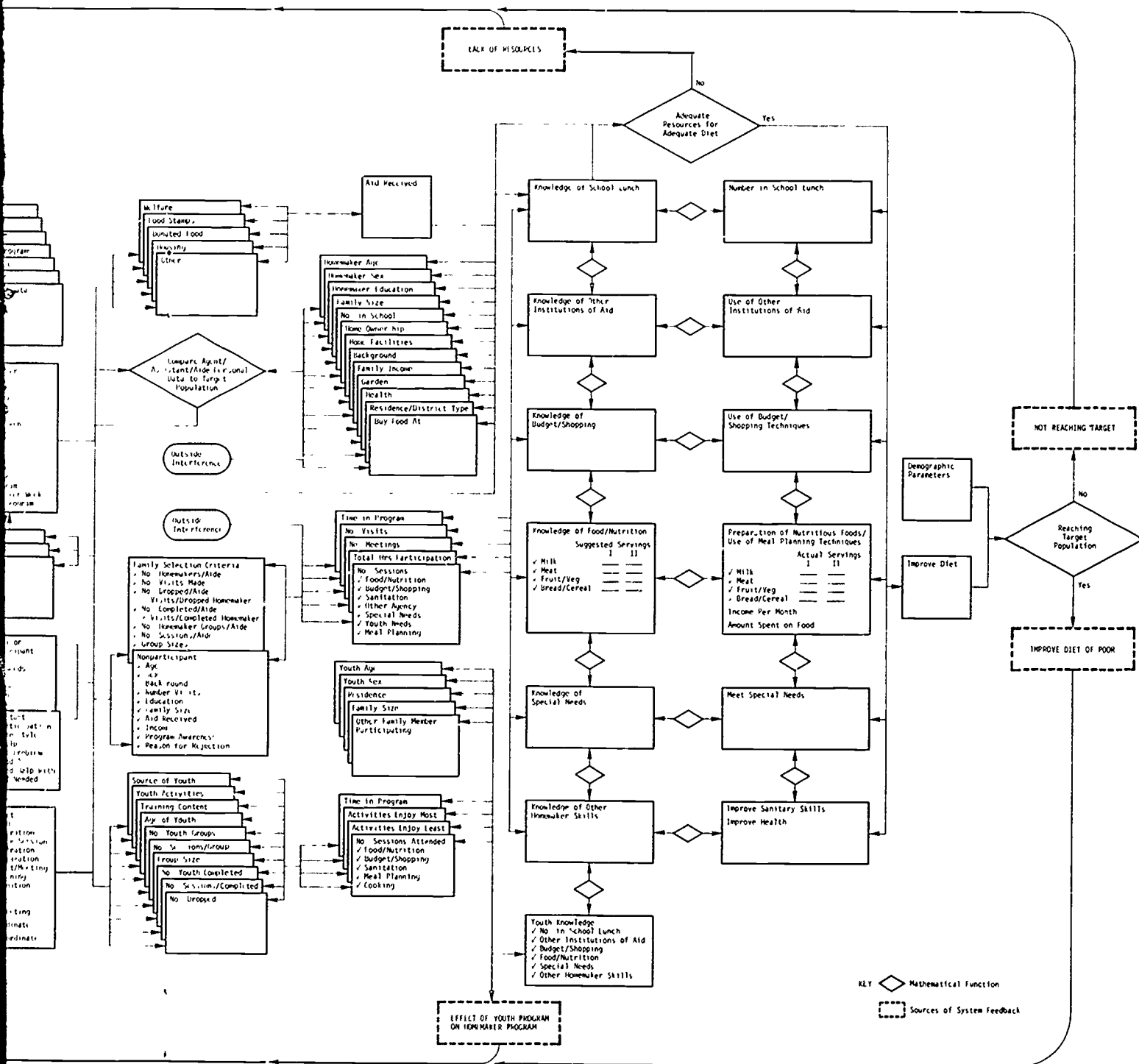


Figure 1. Descriptive Model of the Expanded Food and Nutrition Education Program





farther and farther from the Extension base, thereby withdrawing the interactive and cooperative spirit which is an underlying philosophy of the Extension environment. Suggestions for program coordination, contained in the section on Program Structures, would allay some of the problems by permitting greater program cohesion and fusion of the program into local Extension structures and activities.

## PROGRAM LEADERSHIP

*There is real opportunity for a surge of leadership at higher echelons of program management.*

### Opportunity for Strong Leadership

We recognize the autonomous nature of Cooperative Extension Service and the supportive role which the Federal level plays in view of this constraint. However, differences between the Expanded Food and Nutrition Education Program and other Extension activities--its national scope, its direction to a single overall objective, its "program" orientation--dictate that the Federal level of program management play a larger role than may be possible or desirable within other Extension domains. Throughout this report, we have identified needs for more emphatic leadership at the State and Federal levels and ways in which this leadership could be provided. We view this situation as an opportunity, as well as a need.

### Federal Role

We would see as a principal source open to Extension Service--USDA the provision of leadership largely through being at the forefront of program technology. This emphasizes the opportunity for Federal leadership by continually presenting State and local program levels with improved and innovative training and management techniques. In addition, State and local program levels can serve as sources of innovative techniques, with the Federal level serving as product mediator and disseminator.

Federal personnel of Extension Service are presently very alert to innovative ideas from both inside and outside Extension. They undertake to pass these items along through a variety of media--telephone, meetings, visits to States, written materials. But these efforts are limited in at least three ways:

- Δ Concentration of effort does not focus on most urgent and difficult operational problems nor on those whose solution will result in the greatest payoff.
- Δ Much of the review and referral of State and local innovations is non-evaluative. The Federal role in this regard is more of a limited clearinghouse than of a focal point for sustaining, integrating, and generalizing the effort across the program.

Δ Program and non-program responsibilities on the part of many of the Federal level staff limit their generation of program specific products. Although there has been and continues to be support through, for example, lesson plans for aide training, these and other efforts--even in coordination with State-initiated efforts--are not comprehensive of program populations and stated curriculum content. The total program developmental output is, to date, insufficient to sustain the program without extensive locally originated efforts.

In response to this opportunity to provide dynamic leadership, we recommend that program management at the Federal level take steps to:

- Δ Assure that existing program-generated training and management methodologies are synthesized into their most coherent and useful form for support to State and local units, i.e., identify, evaluate, modify, and organize the Expanded Food and Nutrition Education Program educational and operational mechanisms in a central source.
- Δ Formulate practical plans for continuing developments which will support increased operational effectiveness over the foreseeable future of program operation, i.e., focus on the difficult residual problems with which existing educational and management processes cannot adequately cope and establish plans for attacking these problems. Areas needing most urgent attention include: family status review processes by which a more precise allocation of effort can be made toward improved family nutritional status (as discussed in the section on Family Nutrition Practices), and identification of specific educational objectives and supporting training materials for youth nutrition education (as discussed under Youth Activities).

### State CES Role

Much of that stated above concerning the Federal leadership role applies also to the State level. However, there is an important distinction at the State level in that it must act in both directions, i.e., responsive to needs at the local level and supportive of total program efforts at the Federal level. Important ways in which States could augment and solidify their program leadership include:

- Δ Acting as an information channel to collect, evaluate, and disseminate information to higher and lower levels of program management and operation.

- Δ Planning, conducting, and coordinating development and test of adaptive control mechanisms and training routines at selected program locations for eventual broad applicability to total State or total program.
- Δ Assisting local units in generating organizational structures for more effective total program coordination and greater fusion of the program into the local Extension structure.

## REACHING THE TARGET AUDIENCE

*The program continues to reach the target family population; selection of youth participants would benefit by increased precision.*

### Family Participant Characteristics

As with the previous program assessment, it was found that the program has concentrated on low-income families; only a relatively small percentage of families not fitting the characteristics of the target population are enrolled. According to the family economic resource data presented in Tables 3 and 4, the average percent adequacy of economic resources for participating families is well below the level of economic resources required for an adequate diet. Other data descriptive of the participating families, presented in Table 2, also demonstrate the program's concentration on the target population. In addition to these quantitative data, our homemaker visits provided first-hand information supporting this conclusion. These personal visits also provided information which suggests that the degree of success enjoyed with respect to this objective is, for the most part, attributable to the expert use of indigenous aides.

Although criteria for selection of program families are well defined, there is some evidence of inappropriate participant selection at all locations. Such occurrences are usually associated with only selected aides. It is not easy--for many reasons--to stop working with a participant once a relationship has been established. Hence, although inappropriate participants may be minimal in number, they generally represent a long-range and costly investment of resources and are not a concern of fleeting importance. In preventing and remedying these situations, agents and supervisory assistants should attend more closely to record information (or missing information) and, in particular, should use this information more frequently in selection of families they visit with the aides.

### Youth Participant Characteristics

Guidelines for youth activities define the target audience as youth between the ages of 9 and 19 years, drawn from the disadvantaged urban population. Descriptive information of the youth participant sample indicates an average age of 11.0 years and an age range between 5 and 18 years (Table 7). In this sample, nearly 3 times as many girls as boys are represented (72 percent and 28 percent, respectively). The sample is highly urban (approximately 95 percent).

There is no reason to believe these characteristics are not representative of the locations included. However, there is no basis by which these distributions can be compared to overall program participation.

Table 7

Youth Participation Characteristics

|                | Number | Percent | Mean  | Standard<br>Deviation | Range |     |
|----------------|--------|---------|-------|-----------------------|-------|-----|
|                |        |         |       |                       | Max   | Min |
| Age            | 135    | -       | 11.04 | 2.76                  | 18    | 5   |
| Sex:           |        |         |       |                       |       |     |
| Female         | 113    | 72.0    | -     | -                     | -     | -   |
| Male           | 44     | 28.0    | -     | -                     | -     | -   |
| Family Size    | 131    | -       | 5.95  | 2.12                  | 15    | 2   |
| Residence:     |        |         |       |                       |       |     |
| Urban          | 143    | 94.7    | -     | -                     | -     | -   |
| Rural Non-Farm | 8      | 5.3     | -     | -                     | -     | -   |
| Farm           | 0      | -       | -     | -                     | -     | -   |

Number varies to exclude unknown data.

If we assume that the study sample is program representative, it contains implications for program operation. From these data, we can project that 68 percent of the interviewed youth participants are between the ages of 8 and 14 years (mean age plus and minus 1 standard deviation), and that 95 percent are between the ages of 5-1/2 and 16-1/2 years (mean age plus and minus 2 standard deviations). If we include in the sample, the sampled 15 teen-agers who serve as teen leaders, our total sample indicates an average age of 11.4 years. To the extent that these data can speak generally for the program, they demonstrate it is reaching a youth audience which exceeds the program guidelines on the lower end of the age scale, but, more importantly, they demonstrate insufficient representation of the higher end of the scale, or older youth.

Through discussion with program personnel and general observation of teen-agers, we know that the younger audience is more easily reached and controlled. And through our attendance at meetings, we observed that the 5- to 8-year olds enjoy and benefit from the program. However, in terms of program objectives, and particularly in

terms of program impact, it appears that too little emphasis is being given to reaching the upper range of the target population--that portion of the audience for whom program impact would be greatest. This is not to state that there is an inability of the program to achieve its long-range objective by working with younger members of the target audience. Yet, it appears that some basic program decision must be made which weighs the implications of expending greater time and effort in development of techniques and approaches which would attract greater numbers of older (greater impact) youth versus its current efforts to attract larger numbers of easier-to-reach younger (lesser impact) youth.

It is not possible to assess the extent to which the program has worked with low-income disadvantaged youth on the basis of standard descriptive data. Neither program information nor our data provide economic status indicators. Examination of youth recruiting practices provides the best descriptive information available. Aides who work with youth indicate that they have frequently recruited children within their own neighborhood as well as those of their participating families. To the extent that aides are indigenous to the target population and/or they reach the target audience, they choose appropriate youth participants. However, both aides and volunteers have used regular community organizations such as churches, schools, community centers, etc., within a geographically defined target area as sources for youth participants. In these circumstances, unless special care is taken, those responding to announcements about the program are better characterized as already integrated into some form of community structure and "joiners" than as disadvantaged. Our attendance at youth meetings and visits with mothers of the youth (participant homemakers) verify this conclusion. Use of community organizations to identify youth participants adds the observed risk of the nutrition education program's serving the source organization by conducting its activities, as opposed to focusing on the program's own mission.

The effects noted above do not imply a failure of the program to meet its objective of reaching disadvantaged youth. However, our observations and discussions with program supervisory personnel, aides, volunteers, and youth suggest that the use of regularly instituted community organizations as recruitment vehicles tends to dilute the propensity for reaching disadvantaged youth, even in depressed areas. Greater emphasis on recruiting procedures and techniques for program personnel (i.e., for supervisory personnel in recruiting indigenous volunteers and for volunteers in recruiting indigenous youth) appears to be a dimension in need of attention.



## OPERATIONAL STRUCTURES

*The link between homemaker and youth efforts should be strengthened to permit greater impact on family nutrition practices.*

### Program Disarticulation

The concept of a unified nutrition education program has not been consistently communicated downward through the program. Although this condition has been corrected to some extent over time, there remain ambiguities of role and responsibility which deter the program from achieving a fully coordinated multiple approach to family nutrition education.

The roles of supervising agents, youth professionals, supervisory assistants, aides, and volunteers are all quite varied from location to location. And there are varying degrees of satisfaction with roles. It is the youth phase of the program around which the problem has become focused. This is partly in response to its later arrival on the scene. But in addition it relates to the lack of a defined structure which placed youth nutrition education into the total program structure in a manner similar to which, at initiation, the program was placed into the ongoing local Extension structure. The incorporation of additional personnel into overall program structure and the emphasis on the use of indigenous volunteers for youth nutrition education further confounded the problem.

Four major factors which vary from one location to another impact importantly on program roles:

- Δ Whether the home economist also fills the youth professional role versus the presence of a separate youth professional.
- Δ The extent to which the youth professional recruits and works with volunteers versus accomplishing these through the aides.
- Δ The extent to which the youth professional works directly with youth versus working through volunteers and/or aides.
- Δ The extent to which volunteers are drawn from the program population.

We have most commonly observed situations in which there has been a separate youth professional who has worked more or less equally through volunteers and directly with youth, using aides primarily to

recruit volunteers or to act as volunteers. Although the aide sometimes serves as a key element in the youth activities, she is seldom viewed as a bona fide member of the youth nutrition education team. Frequently, whether she acted in a paid-aide or volunteer role, she was in the position of reporting to two supervisors.

Emphasis on the indigenous volunteer has created new dimensions and requirements within the program. Our descriptive data on 34 adult volunteers included in the sample indicate that they are frequently recruited by the aide (34 percent) and are, on the average, 35-year old married homemakers with a slightly less than 12th-grade education. They may or may not be indigenous to the target population but they are not usually program homemakers. (Only 10 percent are.) Utilization of volunteer personnel has suffered primarily from their lack of preparation for dealing with groups of disadvantaged youth, sometimes in large numbers. Further, the agent has frequently too-readily assumed adequate volunteer nutritional knowledge--or because of expediency has had to forego nutritional training--even with the availability of training materials. These conditions reflect a circular problem--the volunteer's quick disaffection with the program--the almost constant search for additional volunteers--the lack of time to adequately prepare newly found volunteers. In some locations, focus of operation by the youth and homemaker program emphases within separate communities has further hampered the program in achieving a full family approach to nutrition education.

### Program Unity

In response to these observed conditions, we have provided a sample organizational structure for the local program unit (Figure 2). The role of unit manager may be filled by any one of several different persons. That there be one person responsible for local program operation seems essential. Whether or not supervisory assistants are used is not critical to the organizational structure depicted. In addition to discussions in other portions of this report concerning program roles and responsibilities, the following youth-related roles are identified:

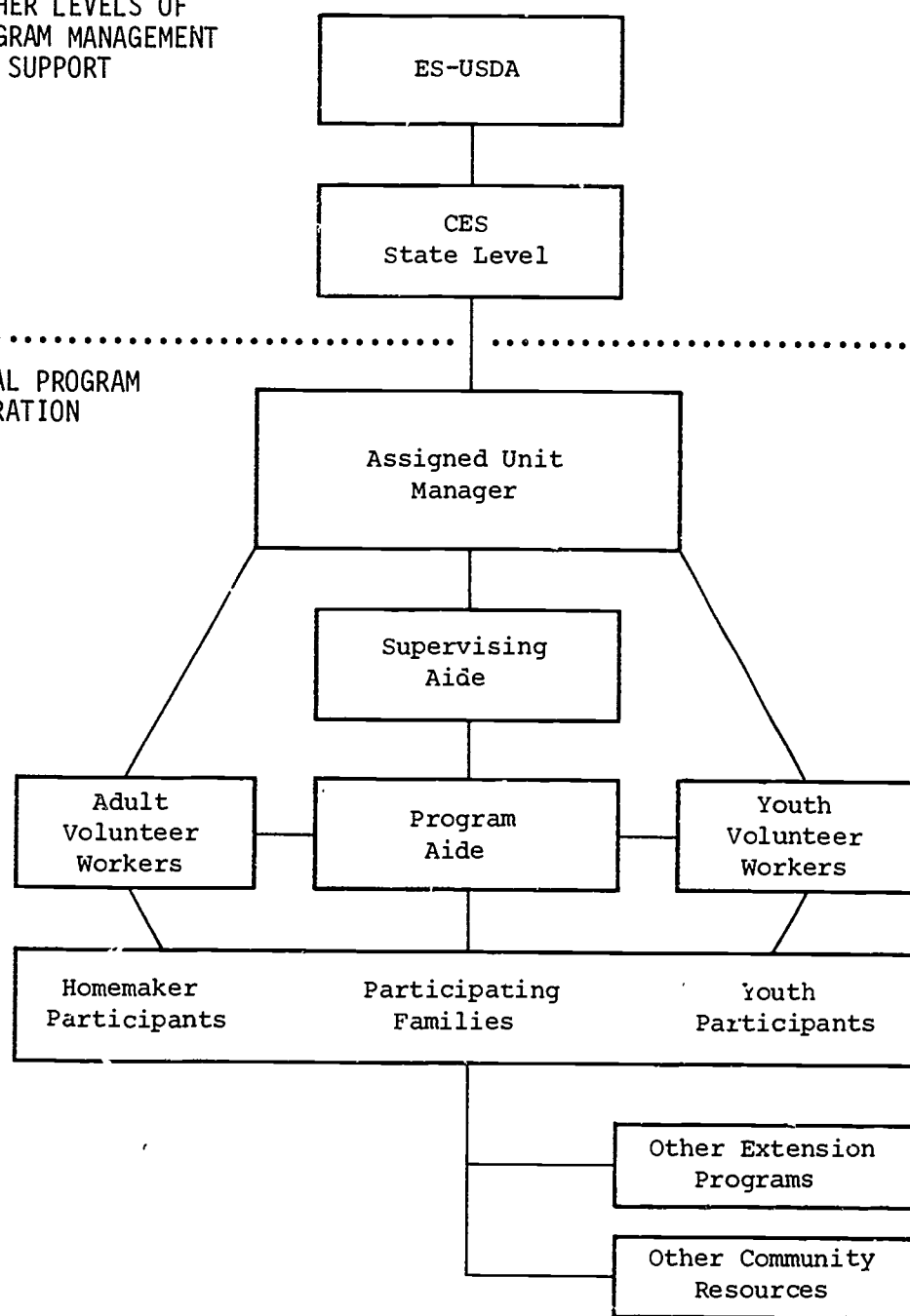
Youth Professionals. In some ways, incorporation of new personnel or reassignment of in-place personnel for youth nutrition education provided a great impetus to the program. But we also observed youth professionals having problems in determining their program responsibilities and establishing themselves within the Extension community. Their special capabilities can be of great benefit to the total program effort. They are often developers of novel and exciting instructional materials, well versed in contemporary instructional technology, and qualified by training and experience to work with youth--sometimes having had prior experience with disadvantaged youth.

.....

HIGHER LEVELS OF  
PROGRAM MANAGEMENT  
AND SUPPORT

.....

LOCAL PROGRAM  
OPERATION



.....

Figure 2. Sample Organizational Chart Depicting Program Personnel and Participant Roles and Interactions. (Prepared in cooperation with the Extension Service.)

In response to the observed problems they have had in working within the program structure, we suggest that:

- Δ Greater emphasis be given to agent interaction to effect increased knowledge of Extension, its services, resources, and materials among youth professionals.
- Δ Greater interaction be achieved between them and aides for their increased understanding of the target population with which they are dealing and better coordination of total program effort.
- Δ Greater attention be given to understanding their usually youthful ways--one of the key factors in their acceptance by the youth audience.

Program Aides. The need for better utilization of aides and clearer definition of aide roles with respect to youth activities is critical. Under the structure described in Figure 2, the aide would work toward improved family nutrition by working primarily with homemakers but also by directly serving youth activities--through recruitment, coordination, and even training and monitoring of volunteers. She would encourage program homemakers and their older youth to become volunteers and might temporarily assist the new volunteer in getting started or to provide continuity between volunteers. Her role as monitor of volunteer activities is especially appropriate when she is interacting with her own homemakers, or their family members, in the volunteer capacity.

Volunteers. A revitalized volunteer recruitment/utilization approach primarily to enlist program homemakers should be planned. Greater effect of volunteer activities is achieved when the following are incorporated:

- Δ Definition of responsibilities.
- Δ Training in nutrition and youth session management. For advanced program homemakers, little attention may be required to the first of these.
- Δ Provision of training materials--lesson plans for volunteer instructors, lesson materials for youth participants.
- Δ Provision of necessary supplies.
- Δ Reimbursement for expenses incurred.
- Δ Supervision.
- Δ Recognition for their efforts.

Two types of volunteers should be identified:

- Δ Those willing to regularly commit themselves to a scheduled series of activities for youth. These volunteers are most appropriately drawn from the program population.
- Δ Those unwilling to make a regular commitment to a scheduled youth activity but who are available to assist during special functions. These persons could come out of the more regular volunteer ranks, as well as from participating families. They would, in some respects, take on the "chaperone" role for tours, trips, etc. If appropriate, they could be encouraged to change their level of commitment to the type described above.

We believe that the impetus for greater program coordination must come from all levels within the program, beginning at the national level. However, given the legacy of autonomy of State and county units, the greatest leverage is likely to come from the State level, since that point is both most likely to be aware of local contingencies and looked to by the counties for guidance. Without guidelines to implement a one-program structure, it is unlikely that local entities will move away from present structures.

## YOUTH ACTIVITIES

*Interpretation of objectives and methodological restrictions impede effectiveness of youth activities.*

In structuring this portion of program evaluation, we focused on:

- Δ The ability of the program to foster increased youth awareness and practice of the principles of good nutrition.
- Δ The extent to which a general improvement in family nutrition practices is effected through work with youth.
- Δ The impact of the program in furthering general personal development of disadvantaged youth through program participation.

### Operational Constraints

The Expanded Food and Nutrition Education Program's attention to youth nutrition education is in response to many urgent needs of the target audience which, while building a set of compelling responsibilities, act also to interfere with program conduct and achievement. Some of the quandries which result are described below:

- Δ The very real nutritional inadequacies of the youth population, especially for teen-aged youth, are in part created by their resistance to better dietary practices, even with appropriate knowledge.
- Δ The focus on disadvantaged urban youth places Extension in the midst of one of the most disturbing societal phenomena of recent times--the inner city disintegration of organizational patterns and structures. Although a continuation of operational contexts for some agents, to many it was a new domain.
- Δ Program fund allocation permitting the hiring of additional youth professionals created the problem of integration of usually young, inexperienced, and non-Extension-indoctrinated personnel into a previously relatively stable environment. Although far from a unique problem, it is one for which generally effective strategies are not available.

- Δ The heritage of 4-H and its legacy of youth education techniques places Extension in an optimum position for the effort but the concept of adapting 4-H procedures and materials to the target audience threatened, to some extent, the 4-H concept. While negativism to the effort was far from universal, the disturbance was fairly general.
- Δ Knowledge about and experience in the use of middle-class volunteers did not adequately prepare agents for recruitment and training of indigenous volunteers nor for satisfying the number required to support a continuing and difficult assignment.

We conducted our evaluation of this program phase in consideration of the constraints the above conditions place on the program's ability to further family nutritional practices through youth nutrition education.

### Evaluation Constraints

The lack of quantitative criterion measures and youth descriptive information somewhat limited the evaluation effort. Review of youth activities depends, therefore, on interview and observational information to a far greater extent than review of homemaker-oriented efforts. The evaluation is further limited by its rather small sample of youth participants (157) and, more importantly, by its restriction to a small number of program locations (7). (See Table 1 for additional descriptive information.) Our inability to include all study locations or to enlarge the sample size at included locations are indicative, to us, of some of the program's operation difficulties. Our efforts to acquire data exceeded the demonstrable results.

Because of its initiation phase during the period of evaluation, we could not expect the youth emphasis to have established a structure or to be able to demonstrate a level of participant performance equal to that of more established program activities. To some extent, then, the emphasis placed on interview and observation data is appropriate to the stage of development of this phase of program activity.

### Nutritional Advances

Nutrition is considered the basic program content in the view of youth professionals, aides and volunteers working with youth, and youth participants. All overwhelmingly indicate food and nutrition education as a major activity. Youth participants also indicate they have enjoyed the nutrition activities, girls to a greater extent than boys (Table 8). These data do not indicate, on a performance basis,



nutritional changes which have been effected for youth or their families. The demonstration of nutritional advances resulting from youth nutrition education should be of concern to program management.

Table 8

Youth Participant Report

|                                     | Boys | Girls | Total |
|-------------------------------------|------|-------|-------|
| <u>Activities Enjoyed Most</u>      |      |       |       |
| Number                              | 44   | 112   | 156   |
| Percent Indicating:                 |      |       |       |
| Food preparation                    | 38.6 | 67.0  | 59.0  |
| Eating the food prepared            | 22.7 | 23.2  | 23.1  |
| Nutrition lessons                   | 4.5  | 6.2   | 5.8   |
| Educational tour                    | 18.2 | 10.7  | 12.8  |
| Picnic or recreational tour         | 22.7 | 15.2  | 17.3  |
| Games and activities                | 13.6 | 5.4   | 7.7   |
| Sewing and crafts                   | 9.1  | 17.0  | 14.7  |
| Other                               | 20.5 | 19.7  | 19.9  |
| <u>Changes/Benefits for Self</u>    |      |       |       |
| Number                              | 43   | 108   | 151   |
| Percent Indicating:                 |      |       |       |
| None                                | 23.3 | 13.0  | 15.9  |
| Eat better                          | 37.2 | 31.5  | 33.1  |
| Cook better/more                    | 18.6 | 39.8  | 33.8  |
| Learned new recipes                 | 23.3 | 19.4  | 17.2  |
| Eat fewer/better snacks             | -    | 2.8   | 2.0   |
| Feel/look better                    | 2.3  | 1.9   | 2.0   |
| Found new interests                 | 11.6 | 5.6   | 7.3   |
| Made new friends                    | -    | 1.9   | 1.3   |
| Other or nothing specific           | 9.3  | 13.0  | 11.9  |
| <u>Changes/Benefits for Family</u>  |      |       |       |
| Number                              | 43   | 99    | 142   |
| Percent Indicating:                 |      |       |       |
| None                                | 41.9 | 31.3  | 34.5  |
| Eat better                          | 7.0  | 12.1  | 10.6  |
| Increased family nutrition interest | 20.9 | 27.3  | 25.4  |
| Use the recipes                     | 16.3 | 17.2  | 16.9  |
| Eat fewer/better snacks             | 2.3  | 1.0   | 1.4   |

Number varies to exclude unknown data. Multiple responses allowed.

To adequately examine the multiple effects of youth and homemaker participation on the family's dietary adequacy would demand a sophisticated set of criterion variables applied in a rigid manner. Hopefully, such a demonstration will be achieved on a limited basis within the future of the program. We can, however, demonstrate that the program is in a good position for such a demonstration. We found that of the youth population included in the study, nearly 63 percent reported that their mother or other adult family member participates in the program and that only 33 percent of the youth had heard of the program through their parent or other adult family member. We caution against over-interpretation of this finding, but it does demonstrate that youth participation behooves adult participation, setting the stage for the multiple effects the program hopes to demonstrate. Nonetheless, we see a need for a more integrated effort for reaching this multiple family impact, as discussed in the section on Operational Structures.

### Youth Personal Development

Our experiences in attending to youth personal development indicate that this objective is frequently ignored or undefined at the local level. This description relates to a confusion of "what" and "how to do" rather than to a rejection of the goal. From our view of the program, the extent to which program activities are narrowly focused upon food and nutrition may be too great. Several factors contribute to this emphasis:

- Δ Specific instruction to adhere rigidly to a nutrition education concept and the lack of definition of nutrition-related activities.
- Δ Reliance on an abundance of recipe materials provided through program sources.
- Δ Lack of guidance as to what to include or how to approach the objective of youth personal development.

We foresee that a curriculum content strictly limited to nutrition will act negatively on program achievement in two ways: first, by keeping out those who would be more easily enticed into participation on the basis of other activities, but who would also participate in and reap benefits of the nutritional education; and secondly, through nutrition saturation, by reducing the duration of program tenure, effecting an overall decrease in the extent of exposure to nutrition education. This phenomenon appears to have been well understood by higher levels of program management. But to date, resources necessary for avoiding the effects described above have not been adequate. In particular, resources have not been adequately

applied to transform Extension's most relevant assets--long-term association/understanding of youth and abundance of youth education materials derived from 4-H activities--to fit disadvantaged youth education needs.

Greater inclusion of personal development areas into the youth curriculum would work to attract the teen-age audience which has been too frequently bypassed by program activities. Our youth interviews demonstrate that, although boys do not reject nutrition education, the inclusion of nutrition-related content and activities appears significant to interesting them in the program (Table 8).

### Educational Objectives

Guidelines for the youth emphasis do not provide a specific set of performance objectives, incorporating a set of criterion measures, as provided for the aide/homemaker effort. We could dismiss our concern here as related to our own behavior-orientation if our interactions with those responsible for local program operation did not voice these same concerns. That many persons in program operation and management are working to determine "what" and "how" to teach is a good sign. Our intent in the following statements is to indicate the steps needed at various program levels to provide the process for a more effective focus of program activities. Essentially, the needs to be filled are:

- Δ Specification of what nutritional and other knowledges are to be achieved, i.e., development of performance objectives. Basic to this specification is the identification of need in terms of population characteristics. For these objectives, population variables would include, in addition to standard sex, age characteristics, etc., dietary deficiency and social interaction characteristics as they can be stated for the target group.
- Δ Identification of measures or observations sufficient to indicate the achievement or non-achievement of the objectives. These are criterion measures such as those provided for the homemaker participants through food recall.
- Δ Provision of materials which support achievement of the behaviors specified.

Performance objectives should be stated broadly enough at the program management level to encompass all potential operational contingencies. Interpretation at the operational level should be made in relation to local conditions, while retaining a constancy with

national objectives. The performance objectives should be interpreted into sequential short-range statements to permit development of tailored training materials. Both the broad statement of performance objectives and the local interpretation should be accompanied by or imply criteria against which performance can be evaluated.

### Educational Materials and Techniques

A great number of instructional materials are used with youth across the program. Within our observations, materials are generally printed and activity is almost restricted to food preparation. Nutrition education of youth has progressed most smoothly where sets of lessons, usually State prepared, have been implemented. These frequently include both youth and instructor presentations. In some instances, the instructor lesson plan structures information into pre-lesson preparation and activity-type information.

Although these materials are observed as the best available (on a judgmental rather than analytic basis), in some ways, they unnecessarily constrain the youth education process.

- Δ The set is limited in number, thus providing an established series of lessons. At completion of the series, the youth group usually is either disbanded or initiates the sequences again.
- Δ They emphasize food preparation to the exclusion of other types of intriguing and active learning experiences. And although the lesson structure does not intend it, sessions often end up as a demonstration by the trainer rather than participant activity.
- Δ Their availability tends to dictate and delimit the educational scope of youth participation.

Although there are ongoing efforts in development across the program, there are, to date, too few results of these efforts available at the operation level. We recognize the constraints in quickly achieving innovative solutions to the difficult problem of preparing materials appropriate to the target audience. For greater and more timely impact, we suggest that adequate resources and concerted and extraordinary efforts be applied to the development of exciting, active, and varied approaches to content and learning situations.

### Program Potential

The great potential that Extension has for a spectacular youth effort through assimilation of 4-H materials has not been adequately realized. It will require considerable skill in translating 4-H program elements into informational and situational structures which are real to the target youth. We know of no organization with greater potential for achieving the goals Extension has set in furthering nutritional improvement through youth education. The network, capabilities, and momentum are there. Sustaining youth interest and the professional effort may prove difficult in view of the operational constraints identified.

## COMMUNITY ROLE

*The program has made reasonable progress in establishing itself within the total community setting.*

The broad area of community impact of the program was examined from the following aspects:

- Δ The program's role in assisting families to gain more adequate economic and family service resources through improved use of USDA Food Assistance Programs, welfare, school lunch, etc.
- Δ Its own interaction with other community programs.
- Δ Its ability to foster a larger community role on the part of its participants.

### Use of USDA Food Programs

In general, program families are making improved use of USDA food assistance available to them. Over the period of program operation, the percentage of families participating in USDA Food Assistance Programs has increased at the study locations (Figure 3). Over this period, use of Food Stamps increased from 13.4 percent to 22.1 percent while use of Donated Foods declined from 22.3 percent to 18.5 percent across the total nutrition education program. Of the families included in the study sample, 27.3 percent use Food Stamps and 10.9 percent use Donated Foods. The larger proportion of Food Stamp users in the study sample is reflective of the heavy representation of urban families to whom Food Stamps are more generally available.

Although some of the increased use of food assistance programs is undoubtedly related to USDA policy changes in eligibility and distribution and to general economic conditions extant during this period, discussions with program personnel and homemakers and observation of program activities indicate that part of the increase is due to success of program aides in convincing and/or helping families to join. However, the following operational characteristics also likely contribute to increased participation in USDA Food Assistance Programs:

- Δ A tendency to seek food assistance program participants for participation in the nutrition education program. Although this appropriate interaction continues in various forms, the tendency to enroll food assistance

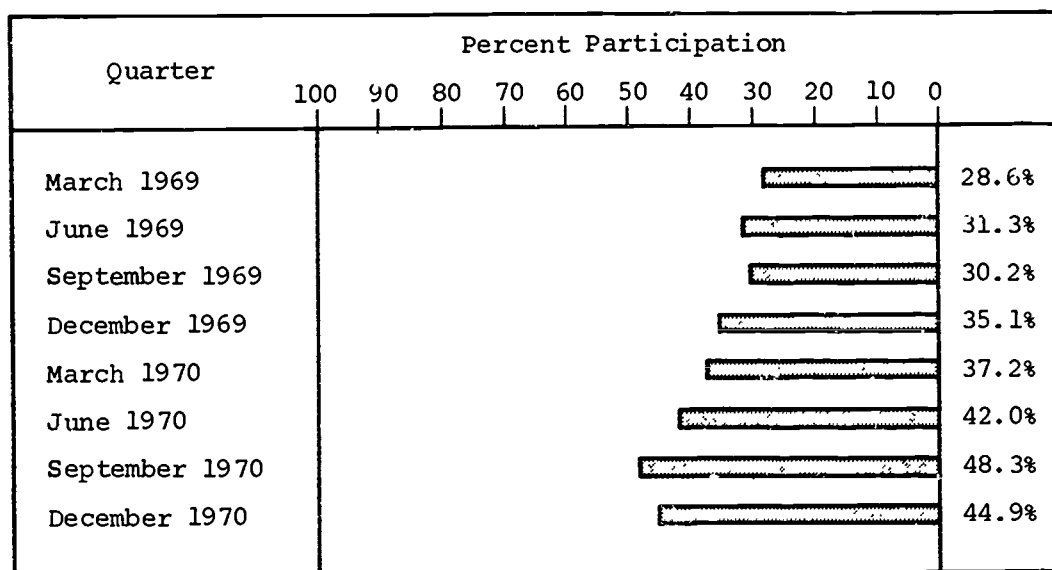


Figure 3. Percent Participation of Program Families at Study Locations in USDA Food Assistance Programs (Program Information System Data)

users was stronger initially than at later stages of program operation. (41.9 percent of 28,433 enrolled families in February 1969 versus 34.5 percent of 68,758 families in April 1969.)

- Δ A tendency to graduate or drop those not participating in food assistance programs, especially where the program has focused its teaching on the use of Donated Foods. This is also in keeping with findings reported on page 10, where it is observed that aides tend to dismiss those families needing less nutrition improvement assistance.

### Use of Other Community Resources

The Office of Economic Opportunity (OEO) Emergency Food and Medical Program and the USDA Supplemental Food Program operate at several study locations and, in general, are effectively used by program families. Aides in these areas are well aware of the potential benefits inherent in such programs, recommending them for use whenever appropriate. Across the study sample, aides reported helping 5.0 percent of the families we visited to acquire these additional food resources.



Our analyses demonstrate school lunch participation at 68.3 percent of the program school children, a figure comparable to that obtained for the total program population. Although there are minor shifts in level of school lunch participation from time to time, we were unable to demonstrate any relationship to tenure in the program or to any of the other family or program participation characteristics.

There is also no evidence that participation in the Expanded Food and Nutrition Education Program has any measurable impact on the use of welfare programs. Welfare participation at the study locations has remained relatively constant (at about 35 percent) over the period of program operation. The demonstrated level of welfare participation is also comparable to that achieved for the total program population.

#### Family Benefit of Resource Assistance

Participation in assistance programs of any sort does not, in and of itself, have a measurable impact on the nutritional level of program families. We were unable to demonstrate any improved nutritional adequacy directly related to participation in other community resource programs. Rather, it is the level of food resource attained--from whatever source--that contributes to dietary adequacy. In addition to the direct contributions aides make to improved family nutrition through nutrition education, their ability to effect greater family utilization of available economic resources contributes to the family's improved posture for sustaining nutritional adequacy. Improved family food resources also support continued program participation by eliminating embarrassment at not having food stuffs to use in food preparation activities.

#### Interaction with Other Community Programs

It would be misleading to suggest that there is a high degree of coordination between the Expanded Food and Nutrition Education Program and other agencies in either rural or urban settings. Interaction continues most commonly to take the form of referral, exchange of materials and information, provision of facilities, participation on advisory councils, and recruitment of aides and volunteers. There is an observed relationship between the degree of interaction and the perspective other agencies maintain of the program. Those who know little about the program tend to feel it is not meeting objectives nor making a serious contribution in helping those it is designed to serve. On the other hand, where there has been considerable interaction, there is strong praise and enthusiasm for the

program, as well as a feeling of its being successful. Good publicity appears to be one aspect of improved community impact of the nutrition education program.

Relating to the community appears to be one of the few aspects of program operation for which rural versus urban setting makes an important difference in optimal strategy. Not only is the program better known in rural locations, it is known and considered important at a much higher level of the local power structure. Urban aides tend to be more autonomous in their interaction with community resource agencies and personnel than rural aides. In urban areas, the supervising agent is less likely to have the range and depth of associations with other agency personnel found in the rural setting.

#### Improved Coordination with Other Community Programs

Helping families to more fully exploit available community resources represents a real source of satisfaction for aides, as well as allowing deprived families to participate meaningfully in the program--by providing the food, money, etc., without which such participation would be impossible. The type of person drawn to aide work is generally one who brings a considerable depth of knowledge and experience about both routine and less well-known community resources. Of the aides included in the study, 34.6 percent had previous aide or community service experience and 79.9 percent had participated in non-paid community service activities. Since helping the family apply for and utilize community resources is a powerful builder of rapport between the program and its participants, any steps program management can take to fully utilize these aide skills and knowledges should be implemented. In situations where higher-level program personnel perform most of the actual interaction with community resource agencies, aides should be given as much responsibility and credit as feasible. In all situations, consideration should be given to designation of one or more aides or supervisory assistants as focal information points concerning one or more types of community resource.

An additional step necessary for full family benefit of available community resources is an enhanced interagency coordination to achieve a concentrated attack on the complex of family needs. A more directed effort in this direction is needed within all community settings. We believe that Extension, because of its community stature and multi-faceted capability, should take the lead in developing such community coordination. Although such efforts exceed the bounds of nutrition education, they should enhance the program's potential for achieving nutrition education objectives. The program provides a good springboard by which Extension could coordinate a full community approach to family needs.

## Participant Community Roles

A reasonable proportion of program homemakers has gained a greater community spirit through participation in the nutrition education program. Of the homemakers visited, 19.3 percent reported such an impact of the program. Program homemakers who participate on advisory panels have begun to serve a useful community role by guiding the program and urging others to take an active interest in community affairs. For most homemaker panel members, this was their first exposure to community participation. Although we did not have an opportunity to attend an advisory panel meeting, program personnel and visited panel members indicated that among the favorable results of this approach is the unmistakable sense of pride exhibited by the homemakers.

Advisory panels appear to be an appropriate route for self-development of program participants. Their use should be encouraged not only because of direct benefit to the members but because they provide assurance for continued effectiveness of the program. Increasing the scope of the panels, giving greater emphasis to inclusion of youth members, and choosing membership on the basis of both tenure and rotation appear to be meaningful emphases for improved advisory panel performance.

Ways in which the Expanded Food and Nutrition Education Program shows considerable promise for enhancing participant community activity include:

- Δ Mobilization of interest and potential for service within the youth phase of the program.
- Δ Assistance to those having achieved adequate nutritional effects to satisfy additional educational needs through assimilation of more traditional Extension educational experiences.
- Δ Identification of participants with potential for effective service in other community roles.

## NEED FOR REMEDIAL ACTIONS

*The need for remedial actions identified earlier has grown. Increasing Extension Service awareness of program weaknesses is a promising sign.*

### Needs Identified in First Evaluation

Findings of this effort substantiate and extend the emphasis of our earlier report upon needed remedial actions. The tone now, however, is more urgent and less optimistic. At the time of that earlier report, the program had largely capitalized on its strong suits--a network of agents already in place, enthusiastic indigenous aides, receptive homemakers. The call for intensive development of more effective management techniques; improved methods of adaptively setting objectives; better definition of career opportunities and performance for aide-type personnel; more attention to definition of performance roles; more varied aide and homemaker training content and techniques; and educational materials more suited to participant needs, life-styles and educational levels has not been answered to a level sufficient to the program's more mature status. Although the program continues to achieve under these constraints, it has not effectively focalized its resources to develop and exploit current management and training technology to meet its full potential. The advent of the youth component has introduced greatly increased status ambiguity, confusion concerning operational objectives, and difficulty in adapting the program to changing circumstances of performance information.

### Growing Concern for Program Stability

Many local personnel express a concern for the fundamental problems and weaknesses of the program as they are identified and discussed throughout this report. Broader, more profound, and longer-range concerns are expressed at the State level--especially concerning effective allocation of effort and performance of the youth component. State leaders reflect a growing interest in applied program research, development, and evaluation. We do not interpret these signs as indicating imminent development of the type discussed above. Rather, we interpret them as favorable for reception of major developmental support as it unfolds.

### Improved Utilization of Program Resources

Throughout the report, we have responded to identified needs for improved program performance by suggesting ways in which these needs could be met. We have incorporated recommendations for the following:

- Δ Operational structures for a unified program effort.
- Δ Strategies for establishment of more precise educational objectives, development of training materials supporting achievement of objectives, and evaluative procedures for identification of achievement.
- Δ Ways in which Federal and State support could enhance program operation.
- Δ Models for improved allocation of program resources toward nutrition education.
- Δ Mechanisms for closer review of progress toward nutrition and nutrition-related knowledges and practices.
- Δ Program personnel role and job responsibility definitions.
- Δ Integration of the program and its participants into a fuller community relationship.
- Δ Improved reach of the program to the target population.

One remaining area needing specific attention in suggesting utilization of resources by which program performance can be enhanced is the use of adaptive control mechanisms. By adaptive control, we mean the concept of basing future program activities on information about past performance. In many respects, all of the above identified areas are adaptive control mechanisms--basing improved program operation on information gained through program experience and through evaluation. In the following paragraphs, we describe some additional ways in which adaptive control mechanisms apply.

Cost/Benefit Analysis. Although State and local levels of the program do a reasonable job of planning budgets and recording costs, there is little evidence that significant efforts are being made at any level to relate cost information to program performance. Even such elementary indicators as cost per enrolled family, per family contact, or per contact hour are not determined with any regularity at most locations.

In general, home agents have not seriously considered any formal efforts to relate cost and benefit data at the local level. Most State leaders seem at least to have toyed with the notion, but cannot see any feasible ways of carrying it out. Program leaders at all levels share a common fear--that cost/benefit analyses will be used to force decisions. This is a fear we share. There is no application of cost/benefit technology in sight which would justify considering such analyses as more than a modest aid to focus on most important data needs and ways to better organize information for decision making than is currently the case.

The most promising current sources of cost/benefit data available are the 24-hour food recall and the number of families reached. If food recall is closely coupled to operational decisions, aide influence on these records would be increased. The number of families reached provides only a quantitative measure and excludes the critical qualitative dimension. For greatest effect, cost/benefit may have to be related to some intermediate performance measure such as aide/participant contact hours. Hopefully, the intermediate measure would be related to more ultimate benefits through special studies. Cost/benefit analysis, if instituted, must be a handmaiden to program leaders and not their master.

Program Expansion. Decisions concerning priorities for introducing the Expanded Food and Nutrition Education Program to new locations are greatly influenced not only by numbers of poor families and by availability of a motivated and capable agent, but also by contributions made to the program by local institutions and demonstration of potential program acceptance by the community. In the choice of operational location within the local unit, even relatively small contributions, such as free office space, play an important role in the choice between locations.

Use of Recorded Information. Records from local levels are sent forward to State and Federal levels in highly consolidated fashion. Local offices lack facilities and capabilities for sophisticated analyses. They cannot generally be performed on the consolidated material sent forward to State and Federal levels. Thus, the program evolves largely without the benefit of verification of expected relationships, or further probing where expected relationships fail to emerge. Although there is enthusiasm for investigation into the more elusive program effects at the local level, their usual lack of research orientation indicates a need for State initiation and support in the conduct of such studies.

The analysis and recording of youth activities is far less adequate than that for families. There is generally an effort made to record that a youth session was held and to indicate the number of youths present. It is not common to record the specific objectives



of the session, the performance achievements of individual or groups, or how extensively participants have been involved in prior youth component activities.

Fund Allocation. Our evaluation did not include a detailed audit of budget preparation or expenditure accounting. However, an effort was made to gain a general understanding of the program's budget-making, fund-allocating, and cost-reporting processes. Based on this review, we would make the following observations:

- Δ Fund handling at all levels seems to receive appropriate levels and kinds of care.
- Δ States see the Federal level as an appropriate focal point for justifying yearly program budgets. However, they continue to have some difficulty in adjusting to the greater need for yearly justification than is the case with their regular funds.
- Δ Although Extension Service-USDA allocates a fixed amount to the States, the Federal level is not seen by the States as having a very powerful role in modeling State programs.
- Δ In addition to a professional identity with the Federal level and their desire to obtain technical assistance, there are two important reasons why States should support the Federal level:
  - Many of the key decisions concerning total magnitude of the program budget request are made at the Federal level. An increase in the total program budget is likely to effect an increase in their portion of it.
  - The Federal level must handle budgets through the USDA, the Office of Management and Budget, and Congressional hearings. States must be depended upon to provide support for these actions.

### Meeting Program Support Needs

State leaders generally applaud the changed priorities and re-allocation of resources which have resulted from the Expanded Food and Nutrition Education Program. However, they feel they have reached the limit of general resources they can allocate to support of the program. Although they are generally optimistic about prospects for eventual additional State and local funds for the program,



they feel any further increase in professional services and support they provide to the program in the near future will require full program funding.

Given these limitations on the ability of States to provide increased program support and the need for source materials generalizable to the total program, the responsibility for Extension Service at the Federal level to provide needed remedial actions identified through this evaluation cannot be overemphasized. Further, we do not perceive a CES resistance here, but rather an urgent request for timely response.

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